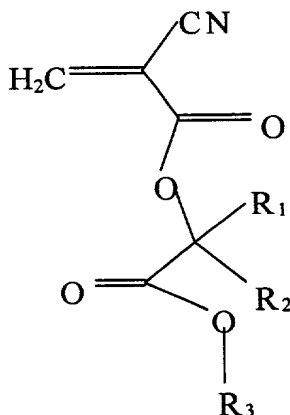


WHAT IS CLAIMED IS:

1. A biocompatible adhesive composition, comprising:
 a first monomer species; and
 a second monomer species different from said first monomer species,
 wherein at least said first monomer species is absorbable, and
 an absorption rate of said first monomer species is different from an
 absorption rate of said second monomer species.

2. The biocompatible adhesive composition of claim 1, wherein said first monomer species comprises an alkyl ester cyanoacrylate.

3. The biocompatible adhesive composition of claim 2, wherein said alkyl ester cyanoacrylate has the formula

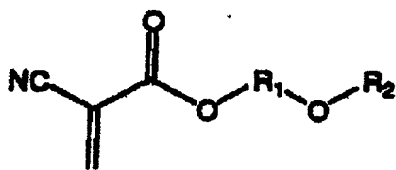


wherein R_1 and R_2 are independently H, a straight, branched or cyclic alkyl group, or are combined together in a cyclic alkyl group, and R_3 is a straight, branched or cyclic alkyl group.

4. The biocompatible adhesive composition of claim 2, wherein said alkyl ester cyanoacrylate is selected from the group consisting of butyl lactoyl cyanoacrylate, butyl glycoloyl cyanoacrylate, isopropyl glycoloyl cyanoacrylate, ethyl lactoyl cyanoacrylate, and ethyl glycoloyl cyanoacrylate.

5. The biocompatible adhesive composition of claim 1, wherein said first monomer species comprises an alkyl ether cyanoacrylate.

6. The biocompatible adhesive composition of claim 5, wherein said alkyl ether cyanoacrylate has the formula



where R₁ is a straight, branched or cyclic alkyl, and R₂ is a straight, branched or cyclic alkyl group.

7. The biocompatible adhesive composition of claim 6, wherein said alkyl ether cyanoacrylate is selected from the group consisting of isopropoxy ethyl cyanoacrylate and methoxy butyl cyanoacrylate.

8. The biocompatible adhesive composition of claim 1, wherein said second monomer species comprises a cyanoacrylate other than an alkyl ester cyanoacrylate and an alkyl ether cyanoacrylate.

9. The biocompatible adhesive composition of claim 8, wherein said second monomer species is an alkyl α -cyanoacrylate, having an alkyl group of from about 2 to about 12 carbon atoms.

10. The biocompatible adhesive composition of claim 8, wherein said second monomer species is selected from the group consisting of octyl α -cyanoacrylate, hexyl α -cyanoacrylate, butyl α -cyanoacrylate and ethyl α -cyanoacrylate.

11. The biocompatible adhesive composition of claim 1, wherein a weight ratio of said first monomer species to said second monomer species is from about 25:75 to about 75:25.

12. The biocompatible adhesive composition of claim 1, wherein said first monomer species comprises an alkyl ester cyanoacrylate and said second monomer species comprises an alkyl α -cyanoacrylate.

13. The biocompatible adhesive composition of claim 1, wherein said first monomer species comprises butyl lactoyl cyanoacrylate and said second monomer species comprises octyl α -cyanoacrylate.

14. The biocompatible adhesive composition of claim 1, wherein said composition further comprises at least one additive selected from the group consisting of anionic stabilizing agents, free radical stabilizing agents, colorants, and plasticizers.

15. The biocompatible adhesive composition of claim 1, wherein said composition comprises:

a monomer blend comprising from about 25 to about 40 parts by weight butyl lactoyl cyanoacrylate and from about 60 to about 75 parts by weight octyl cyanoacrylate (OCA);

at least one anionic stabilizer; and

5 at least one radical stabilizer.

16. The biocompatible adhesive composition of claim 15, wherein said at least one anionic stabilizer comprises about 25 to about 100 ppm of sulfuric acid and from about 1 to about 50 ppm sulfur dioxide, and said at least one radical stabilizer comprises from about 100 to about 2000 ppm hydroquinone, from about 10 to about 200
10 ppm p-methoxyphenol, and from about 100 to about 10,000 ppm butylated hydroxyanisole.

17. The biocompatible adhesive composition of claim 1, wherein said first and second monomer species have different absorption rates, such that an absorption rate of a faster absorbing monomer species is at least 10% faster than an absorption
15 rate of a slower absorbing monomer species.

18. A method of treating living tissue, comprising:
applying to living tissue a biocompatible adhesive composition comprising at least one alkyl ester cyanoacrylate monomer and a polymerization initiator or accelerator, wherein said polymerization initiator or accelerator is a
20 purified benzalkonium chloride.

19. The method of claim 18, wherein two or more polymerization initiators or accelerators are applied to said living tissue.

20. A method of treating living tissue, comprising:
applying to living tissue a biocompatible adhesive composition
25 comprising:
at least one alkyl ester cyanoacrylate monomer;
a second monomer species having an absorption rate different from an absorption rate of said at least one alkyl ester cyanoacrylate monomer; and
a polymerization initiator or accelerator, wherein said polymerization
30 initiator or accelerator is a quaternary amine.

21. The method of claim 20, wherein two or more polymerization initiators or accelerators are applied to said living tissue.

09919877.080201

22. The method of claim 20, wherein said second monomer species comprises a cyanoacrylate other than an alkyl ester cyanoacrylate and an alkyl ether cyanoacrylate.

23. The method of claim 22, wherein said second monomer species is an alkyl α -cyanoacrylate, having an alkyl group of from about 2 to about 12 carbon atoms.

24. The method of claim 22, wherein said second monomer species is selected from the group consisting of octyl α -cyanoacrylate, hexyl α -cyanoacrylate, butyl α -cyanoacrylate and ethyl α -cyanoacrylate.

25. The method of claim 20, wherein a weight ratio of said at least one alkyl ester cyanoacrylate monomer to said second monomer species is from about 25:75 to about 75:25.

26. The method of claim 20, wherein said at least one alkyl ester cyanoacrylate monomer comprises butyl lactoyl cyanoacrylate and said second monomer species comprises octyl α -cyanoacrylate.

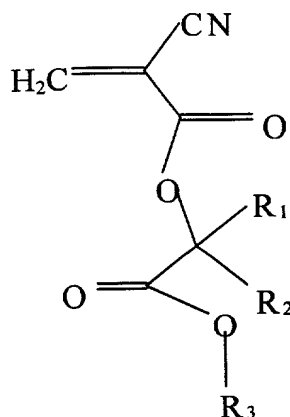
27. The method of claim 20, wherein said adhesive composition further comprises at least one additive selected from the group consisting of anionic stabilizing agents, free radical stabilizing agents, colorants, and plasticizers.

28. A kit comprising a saleable package comprising:
a first monomer species;
a second monomer species different from said first monomer species;
and
a polymerization initiator or accelerator for at least one of said first and second monomer species,
- - wherein at least said first monomer species is absorbable, and
an absorption rate of said first monomer species is different from an absorption rate of said second monomer species.

29. The kit of claim 28, wherein said first monomer species comprises an alkyl ester cyanoacrylate.

30. The kit of claim 29, wherein said alkyl ester cyanoacrylate has the formula

09919877.000201



wherein R_1 and R_2 are independently H, a straight, branched or cyclic alkyl group, or are combined together in a cyclic alkyl group, and R_3 is a straight, branched or cyclic alkyl group.

5 31. The kit of claim 29, wherein said alkyl ester cyanoacrylate is selected from the group consisting of butyl lactoyl cyanoacrylate, butyl glycoloyl cyanoacrylate, isopropyl glycoloyl cyanoacrylate, ethyl lactoyl cyanoacrylate, and ethyl glycoloyl cyanoacrylate.

10 32. The kit of claim 28, wherein said second monomer species comprises a cyanoacrylate other than an alkyl ester cyanoacrylate and an alkyl ether cyanoacrylate.

33. The kit of claim 32, wherein said second monomer species is an alkyl α -cyanoacrylate, having an alkyl group of from about 2 to about 12 carbon atoms.

15 34. The kit of claim 32, wherein said second monomer species is selected from the group consisting of octyl α -cyanoacrylate, hexyl α -cyanoacrylate, butyl α -cyanoacrylate and ethyl α -cyanoacrylate.

35. The kit of claim 28, wherein a weight ratio of said first monomer species to said second monomer species is from about 25:75 to about 75:25.

20 36. The kit of claim 28, wherein said first monomer species comprises an alkyl ester cyanoacrylate and said second monomer species comprises an alkyl α -cyanoacrylate.

37. The kit of claim 28, wherein said first monomer species comprises butyl lactoyl cyanoacrylate and said second monomer species comprises octyl α -cyanoacrylate.

25 38. The kit of claim 28, wherein said composition further comprises at least one additive selected from the group consisting of anionic stabilizing agents, free radical stabilizing agents, colorants, and plasticizers.

39. The kit of claim 28, wherein said polymerization initiator or accelerator is a quaternary amine.

40. The kit of claim 28, wherein said polymerization initiator or accelerator is selected from the group consisting of domiphen bromide and

5 benzyldimethylhexadecylammonium chloride.

41. The kit of claim 28, wherein said first and second monomer species are contained in a same container.

42. The kit of claim 28, wherein said first and second monomer species are contained in different containers in said kit.

10 43. The kit of claim 28, wherein said polymerization initiator or accelerator is a polymerization initiator or accelerator for said first monomer species, and said kit further comprises a second polymerization initiator or accelerator that is a polymerization initiator or accelerator for said second monomer species.

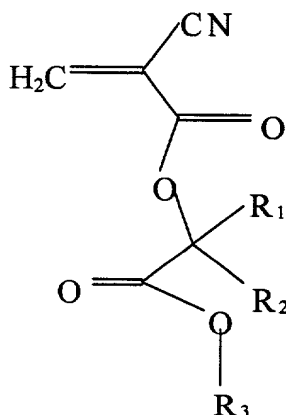
15 44. The kit of claim 28, further comprising one or more additives mixed with at least one of said first and said second monomer species.

45. The kit of claim 28, further comprising one or more additives that is separated from said first and said second monomer species.

20 46. A method of treating living tissue, comprising:
applying to internal living tissue in a living organism the biocompatible adhesive composition of claim 1.

47. The method of claim 46, wherein said first monomer species comprises an alkyl ester cyanoacrylate.

48. The method of claim 47, wherein said alkyl ester cyanoacrylate has the formula



wherein R_1 and R_2 are independently H, a straight, branched or cyclic alkyl group, or are combined together in a cyclic alkyl group, and R_3 is a straight, branched or cyclic alkyl group.

49. The method of claim 47, wherein said alkyl ester cyanoacrylate is
5 selected from the group consisting of butyl lactoyl cyanoacrylate, butyl glycoloyl cyanoacrylate, isopropyl glycoloyl cyanoacrylate, ethyl lactoyl cyanoacrylate, and ethyl glycoloyl cyanoacrylate.

50. The method of claim 46, wherein said second monomer species
10 comprises a cyanoacrylate other than an alkyl ester cyanoacrylate and an alkyl ether cyanoacrylate.

51. The method of claim 50, wherein said second monomer species is an alkyl α -cyanoacrylate, having an alkyl group of from about 2 to about 12 carbon atoms.

52. The method of claim 50, wherein said second monomer species is
15 selected from the group consisting of octyl α -cyanoacrylate, hexyl α -cyanoacrylate, butyl α -cyanoacrylate and ethyl α -cyanoacrylate.

53. The method of claim 46, wherein a weight ratio of said first monomer species to said second monomer species is from about 25:75 to about 75:25.

54. The method of claim 46, wherein said first monomer species comprises
20 an alkyl ester cyanoacrylate and said second monomer species comprises an alkyl α -cyanoacrylate.

55. The method of claim 46, wherein said first monomer species comprises butyl lactoyl cyanoacrylate and said second monomer species comprises octyl α -cyanoacrylate.

25 56. - The method of claim 46, wherein said composition further comprises at least one additive selected from the group consisting of anionic stabilizing agents, free radical stabilizing agents, colorants, and plasticizers.

57. The method of claim 46, wherein said polymerization initiator or accelerator is a quaternary amine.

30 58. The method of claim 46, wherein said polymerization initiator or accelerator is selected from the group consisting of domiphen bromide and benzyldimethylhexadecylammonium chloride.

59. A biocompatible adhesive composition, comprising:

at least one alkyl ester cyanoacrylate monomer;

a second monomer species having an absorption rate different from an absorption rate of said at least one alkyl ester cyanoacrylate monomer; and

a polymerization initiator or accelerator, wherein said polymerization
5 initiator or accelerator is a quaternary amine.

60. The composition of claim 59, further comprising a second different polymerization initiator or accelerator.

61. The composition of claim 60, wherein said second monomer species comprises a cyanoacrylate other than an alkyl ester cyanoacrylate and an alkyl ether
10 cyanoacrylate.

62. The composition of claim 61, wherein said second monomer species is an alkyl α -cyanoacrylate, having an alkyl group of from about 2 to about 12 carbon atoms.

63. The composition of claim 61, wherein said second monomer species is selected from the group consisting of octyl α -cyanoacrylate, hexyl α -cyanoacrylate,
15 butyl α -cyanoacrylate and ethyl α -cyanoacrylate.

64. The composition of claim 60, wherein a weight ratio of said at least one alkyl ester cyanoacrylate monomer to said second monomer species is from about 25:75 to about 75:25.

65. The composition of claim 60, wherein said at least one alkyl ester cyanoacrylate monomer comprises butyl lactoyl cyanoacrylate and said second monomer species comprises octyl α -cyanoacrylate.
20

66. The composition of claim 60, wherein said adhesive composition further comprises at least one additive selected from the group consisting of anionic
25 stabilizing agents, free radical stabilizing agents, colorants, and plasticizers.

67. A polymerized film formed by curing the composition of claim 59.

68. A polymerized film formed from the polymerization of a first monomer species and a second monomer species different from said first monomer species, wherein at least said first monomer species is absorbable and an absorption rate of said
30 first monomer species is different from an absorption rate of said second monomer species.